Spring Survey Form [May 23, 2008]

Date

Quad Map, section #	**Location; tributary/creek destination**	**Forest ID # for spring (if available)**
Forest and District	**Allotment and Pasture**	**Forest ID # for spring (if available)**
Date of Livestock Entry	**Date of Livestock Exit**	**Aspect**
GPS Setting (circle one): **NAD CONUS 27** **NAD 83** **WGS84**	**GPS Reading**	**Elevation**

<u>Recorder</u> & Group Members:	**Flow description**	**Spring type (Circle one)** Cave spring Limnocrene Spring Rheocrene springs Mound form springs Heleocrene springs Hillslope spring Gushette spring Hanging gardens Geysers Fountain springs Exposure springs Hypocrene springs
Temperature **Air:** **Water:**		**Habitat type (circle one)** Cliff Face Marsh Riparian Pools Stream Bank Other:
Photos recorded on photo sheet?	**Other notes**	

1. **FENCED SPRING?**

    a. Describe the type of fencing, and size of area fenced

    b. Describe the functioning of the fence

    c. Do wetlands associated with the spring extend beyond the boundary of the fencing? Describe

    d. Describe sign of livestock, wild ungulate, or other wildlife use of the spring

2. **DEVELOPED SPRING?**
    a. How is water collected?

3. **UNFENCED SPRING?**
    a. Describe nature and condition of wetlands associated with the spring

    b. Describe sign of livestock, wild ungulate, or other wildlife use of the spring

4. **VEGETATION**
    a. Describe the structure and diversity of vegetation immediately adjacent to the spring.

    b. Note dominant plant species (if known) and photographs useful for I.D. along with plant specimens if dominant species not known.

    c. Describe vegetation conditions within any wetlands/riparian systems linked directly to the spring

5. What is the spring substrate (e.g., sediment, gravel, rocks)?

6. Describe insect or other invertebrate activity at the spring

7. Describe ungulate/wildlife sign in any wetlands/riparian systems linked to the spring

Notes for Springs Description:

1. **Record air and water temperature** (^{o}C). First, record the ambient air temperature upon arrival at the site in degrees Celsius, to one decimal place or rounded off to the nearest degree. Second, record the water temperature in the spring orifice, if possible, in degrees Celsius, to one decimal place or rounded off to the nearest degree.

2. **Describe the flow** out of the spring orifice in detail. Example: Spring slowly flows out of orifice, trickles (20cm wide and 2cm deep flow) for 20m and then disappears.

3. Circle the **spring type** based on the descriptions described below.

Spring Type	Description
Cave springs	emerge entirely within a cave environment and not directly connected to surface flow
Limnocrene springs	emerge as one or more lentic pools
Rheochrene springs	emerge as flowing streams
Mound-form springs	emerge from (usually carbonate) precipitate mounds
Heleocrene springs	emerge usually in a diffuse fashion in cienega (marshy, wet meadow) settings.
Hillslope springs	emerge from non-vertical hillslopes at 30-60^{o} slope, and usually have indistinct or multiple sources
Gushette springs	pour from cliff faces
Hanging gardens	complex, multi-habitat springs emerge along geologic contacts and seep, drip, or pour onto underlying wall
Geysers	geothermal springs that emerge explosively and usually erratically
Fountain springs	cool-water artesian springs that are forced above the land surface by stratigraphic head-driven pressure.
Exposure springs	settings in which ground water is exposed at the surface but does not flow
Hypocrene springs	springs in which the water never reaches the surface

4. Circle the **habitat type** based on the descriptions below:

Type	Description
Cliff face	Vertical rock wall, with minor vegetation growth
Marsh	Wet meadow
Riparian	Riparian vegetation present (i.e. cottonwood, willow, tamarisk, etc.)
Pools	Standing water
Stream Bank	Side of an ephemeral channel-highly disturbed
Other: _____	Describe other type

5. **Photo points** should be selected in relation to distinct fixed objects, such as ledges or large rocks. The reference points should be located within 60m of the photo point and include the riparian zone, distinguishing landmarks, upland vegetation and the spring source.